

Nicotiana glauca R. Graham (Solanaceae)
Tree Tobacco

Description. Shrub or small tree, 4-6(8) m tall; stems erect to ascending, glabrous, glaucous. Leaves alternate, long-petiolate, the blades 3-15 cm long, ovate to broadly lanceolate, glaucous, margins entire, apices acute to obtuse, the bases acute to subcordate. Inflorescence an open, terminal panicle. Flowers radial, calyx 8-12 mm long, salverform, the five lobes somewhat unequal, triangular; corolla 30-40 mm long, salverform, yellow; stamens 5, equal inserted on the mid-tube and included; ovary superior, somewhat 4-lobed, the style included to slightly exserted. Fruit a capsule, 7-15 mm long, ovoid; seeds many, reddish brown, shiny. In California, flowering from March to November (Munz 1959, Nee 1993, Webb et al. 1988, Wiggins 1951).

Geographic distribution. A native of South America, tree tobacco has been introduced into the southwestern United States, Mexico, Australia, Hawaii, New Zealand, southern Africa, and Europe (Arnold and de Wet 1993, Chapman 1991, Goodspeed 1954, Harris 1966, Nee 1993, Wagner et al. 1990, Webb et al. 1988, Wiggins 1951, Munz 1959).

First reported by Parish (1920) from the southeastern deserts, but it may have become naturalized earlier (Robbins 1940). It has been reported from San Nicolas, Santa Catalina, and Santa Cruz islands (Junak et al. 1993) and from most California counties west of the Sierra Nevada (Anonymous 1998, Nee 1993).

Reproductive and vegetative biology: *Nicotiana glauca* is apparently self-compatible (Cruzan 1986), with seed set approaching 100% in manually self-pollinated flowers (Hernandez 1981). Cruzan studied pollen germination rates relative to density of grain deposition on the stigma. In a comparative study of several Solanaceae, Galetto and Bernardello (1993) studied patterns of nectar accumulation in *Nicotiana glauca*. Hernandez (1981) reported Seeds germinate readily after dispersal, especially in open sites free from competition (Hernandez 1981). Most species of long-tubed *Nicotiana* are pollinated by moths or hummingbirds (Proctor et al. 1996, Richards 1978), but tree tobacco is apparently pollinated by birds in naturalized habitats (Galetto and Bernardello 1993, Hernandez 1981). No other literature specific to *N. glauca* was found pertaining to its reproductive or vegetative biology.

Ecological distribution. Tree tobacco generally occurs in open, disturbed sites, waste places, and colonizes recent burns in southern California chaparral (Hanes 1990, Harris 1966, Purser 1934, Munz 1959, Nee 1993).

Weed status. Tree tobacco is not considered a noxious weed in agricultural or horticultural practice, at least at a global level (not listed by Holm et al. 1977), and was not listed for the United States in Lorenzi and Jeffery (1987). However, it is considered a potentially noxious weed by the State Dept. of Food and Agriculture (Anonymous 1996). *Nicotiana glauca* has been reported to cause poisoning to cattle and pigs (Keeler and Crowe 1983, Plumlee et al. 1993)

Microbial pathogens. *Nicotiana glauca* is known to be a host for tobacco mosaic virus (Fraile et al. 1996, Randles et al. 1981, Valverde et al. 1991) and the bacterial disease, *Agrobacterium tumefaciens* (Metts et al. 1991).

Insect pathogens. No literature was found that reported deleterious insects on *Nicotiana glauca*, although Lung (1979) and Lung and Goeden (1982) reported it as a host of the beetle, *Corimelaena extensa*. Baldwin and Callahan (1993) suggested that accumulations of alkaloids in *N. glauca* served to significantly reduce insect predation.

Herbicide control. No literature was found that specifically reported herbicide control of *N. glauca*.

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